

CLAIMS

What is claimed is:

- 1 1. A fiber optic module comprising:
2 a push-actuator to release the fiber optic module from a
3 cage assembly; and
4 one or more electro-optic transducers to convert optical
5 signals into electrical signals or electrical signals into
6 optical signals.
- 7 2. The fiber optic module of claim 1 wherein,
8 the fiber optic module is an SFP fiber optic module and the
9 cage assembly is an SFP cage assembly.
- 10 3. The fiber optic module of claim 1 wherein,
11 the push-actuator is a push button.
- 12 4. The fiber optic module of claim 1 wherein,
13 the push-actuator is a kick actuator.
- 14 5. The fiber optic module of claim 1 wherein,
15 the push-actuator includes one or more grooves to slideably
16 engage the fiber optic module.
- 17 6. The fiber optic module of claim 1 wherein,
18 the push-actuator slides to release the fiber optic module
19 from the cage assembly.
- 20 7. The fiber optic module of claim 1 wherein, the push-
21 actuator includes
22 one or more ramps which cause the fiber optic module to be

4 released from the cage assembly when the push-actuator is
5 pushed.

1 8. The fiber optic module of claim 1 further comprising:
2 a second actuator with one or more ramps along one side,
3 the push-actuator causes the second actuator to slide to release
4 the fiber optic module from the cage assembly.

1 9. The fiber optic module of claim 1 wherein,
2 the push-actuator includes
3 an orientation indicator to indicate the fiber optic
4 module which the push-actuator releases.

1 10. The fiber optic module of claim 1 wherein,
2 the push-actuator includes
3 a push tab,
4 a shaft coupled to the push tab at a first end, and
5 a hook coupled to a second end of the shaft.

1 11. The fiber optic module of claim 1 wherein,
2 the push-actuator is located at a bottom side of the fiber
3 optic module.

1 12. The fiber optic module of claim 1 further comprising:
2 a nose having a nose grip to pull out on the fiber optic
3 module.

1 13. The fiber optic module of claim 1 further comprising:
2 a pull-tab to disengage the fiber optic module from the
3 cage assembly.

1 14. The fiber optic module of claim 13 wherein,

2 the pull-tab includes a shield to contain EM radiation.

1 15. The fiber optic module of claim 13 wherein,
2 the pull-tab is located at a top side of the fiber optic
3 module and the push-actuator is located at a bottom side of the
4 fiber optic module.

1 16. The fiber optic module of claim 13 wherein,
2 the pull-tab is located at a bottom side of the fiber optic
3 module and the push-actuator is located at a bottom side of the
4 fiber optic module.

17. The fiber optic module of claim 13 wherein,
the pull-tab is coupled to ground.

18. The fiber optic module of claim 13 wherein,
the pull-tab includes
a pull grip having dimples to prevent slippage.

19. The fiber optic module of claim 13 wherein,
the pull-tab is formed of a conductive material.

20. The fiber optic module of claim 13 wherein,
the pull-tab is formed of a solid material.

21. The fiber optic module of claim 13 wherein,
the pull-tab is formed of metal.

22. The fiber optic module of claim 13 wherein,
the pull-tab is formed of a plastic.

23. The fiber optic module of claim 13 wherein,

2 the pull-tab includes
3 an arm to couple to the fiber optic module, and
4 a handle at an end of the lever arm for a user to grab
5 the pull-tab.
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1 24. The fiber optic module of claim 13 wherein,
2 the handle of the pull-tab has
3 a grip to grip the handle with one or more fingers of
4 the user.

5 25. The fiber optic module of claim 13 further comprising:
6 a nose having a nose grip to pull out on the fiber optic
module.

7 26. The fiber optic module of claim 13 wherein,
8 the pull-tab includes
9 a pull grip,
10 a lever arm coupled to the pull grip,
11 a shield coupled to the lever arm, and
12 grounding tabs coupled to the shield.
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1 27. A push-actuator for fiber optic modules having one or
2 more electro-optic transducers, the push actuator comprising:
3 a push button;
4 a push rod arm coupled to the push button at a first end;
5 and
6 a hook coupled to the push rod arm at another end to hook
7 to a second actuator.

1 28. The push-actuator of claim 27 wherein,
2 the push button is a kick actuator.

1 29. The push-actuator of claim 27 wherein,
2 the push-actuator slides to cause the second actuator to
3 release the fiber optic module from a cage assembly.

1 30. The push-actuator of claim 27 wherein, pushing the
2 push-actuator causes the second actuator to slide thereby
3 releasing the fiber optic module from a cage assembly.

1 31. The push-actuator of claim 27 wherein,
2 the push-actuator includes one or more grooves to slideably
3 engage the fiber optic module.

1 32. The push-actuator of claim 27 wherein, the second
2 actuator is a ramp actuator and includes
3 one or more ramps which cause the fiber optic module to be
4 released from a cage assembly when the push-actuator is pushed.

1 33. The push-actuator of claim 27 wherein,
2 the push button includes
3 an orientation indicator to indicate the fiber optic
4 module which the push-actuator releases.

1 34. The push-actuator of claim 27 wherein,
2 the push-actuator is located at a bottom side of the fiber
3 optic module.

1 35. A push-actuator for fiber optic modules having one or
2 more electro-optic transducers, the push actuator comprising:
3 a push button; and
4 a push rod arm coupled to the push button at a first end,
5 wherein pushing the push button causes the push rod arm to slide

6 thereby releasing the fiber optic module from a cage assembly.

1 36. The push-actuator of claim 35 further comprising:
2 one or more wedges coupled to a second end of the push rod
3 arm, wherein pushing the push button causes the one or more
4 wedges to slide thereby releasing the fiber optic module from a
5 cage assembly.

1 37. The push-actuator of claim 35 wherein,
2 the push-button includes
3 an orientation indicator to indicate the fiber optic
4 module which the push-actuator releases.

1 38. The push-actuator of claim 35 wherein,
2 the push-actuator is located at a bottom side of the fiber
3 optic module.

1 39. The push-actuator of claim 35 wherein,
2 the push-actuator includes grooves to slideably engage the
3 fiber optic module.

1 40. A fiber optic module comprising:
2 means for converting optical signals into electrical
3 signals or electrical signals into optical signals; and
4 means for disengaging the fiber optic module from a cage
5 assembly by depressing a push button.

1 41. The fiber optic module of claim 40 further comprising:
2 means for slideably engaging the means for disengaging the
3 fiber optic module.

1 42. The fiber optic module of claim 40 further comprising:

means for withdrawing the fiber optic module from the cage
by pulling.

43. The fiber optic module of claim 40 further comprising:
means for slideably engaging the means for disengaging the
fiber optic module.

44. The fiber optic module of claim 40 further comprising:
means for indicating the fiber optic module which the means
for disengaging releases.

45. The fiber optic module of claim 40 wherein,
the means for disengaging the fiber optic module includes,
means for lifting a latch to disengage the fiber optic
module from the cage assembly by depressing the push button.

46. A method of disengaging a fiber optic module from a
cage assembly comprising:
pushing a push-button to release a latch; and
pulling a pull-tab to disengage the fiber optic module from
the cage assembly.

47. The method of claim 46 comprising:
determining if the latch has been released.

48. A method of engaging a fiber optic module to a cage
assembly comprising:
inserting the fiber optic module into an opening in the
cage assembly;
pushing the fiber optic module into the cage assembly; and
determining if the fiber optic module is fully inserted
into the cage assembly by checking whether a push button coupled

